

PATENT

REMARKS

The Office Action dated January 6, 2006 (hereinafter, "the Present Office Action") has been received and considered. In this response, claims 7-9 have been canceled without prejudice or disclaimer. Reconsideration of the outstanding rejections in the present application is respectfully requested based on the following remarks.

Withdrawal of Finality of the Office Action

The Applicant notes with appreciation the withdrawal of the finality of the Office Action mailed October 18, 2005 (hereinafter, "the Previous Office Action").

Obviousness Rejection of Claims 1-18

At page 4 of the Present Office Action, claims 1-18 are rejected under 35 U.S.C. Section 103(a) as being unpatentable over Parker (U.S. Patent No. 5,528,704) in view of Greggain (U.S. Patent No. 5,594,676). This rejection is respectfully traversed because the proposed combination of Parker and Greggain fails to disclose or suggest the particular combinations of features recited by claims 1-6 and 10-18.

Parker and Greggain fail to disclose or suggest a third variable indicating a number of right shifts, when applied to a second variable, indicates a number of phases used in a scaling cycle as recited by claim 1

Claim 1 recites the features of providing a control word comprising a second variable indicating a number of output pixels in a scaling cycle and a third variable indicating a number of right shifts, which when applied to the second variable, indicates a number of phases used in the scaling cycle. The Present Office Action acknowledges that Parker fails to teach the claimed feature of the third variable. *See Present Office Action*, p. 5. The Present Office Action therefore attempts to combine the teachings of Greggain with the teachings of Parker to arrive at the features of claim 1 by asserting that Greggain teaches the claimed third variable feature and by asserting that one of ordinary skill in the art "would have found it obvious to incorporate [the] adaptive filtering of Greggain into Parker's method . . ." *Present Office Action*, p. 7.

PATENT

Specifically, the Present Office Action asserts

the claimed third variable feature is related to the selection of the number of phases in an adaptive filtering wherein the adaptive filtering is well known in the art. Moreover, applicant's choice of the number of phases is determined from the output resolution, i.e., the number of output pixels, as being right shifted. This determination of the number of phases is rather arbitrary that the performance over other fixed size filter[s] or other adaptive filter[s] cannot be ascertained.^[1] *Applicant clearly failed to particularly identify the advantage that such selection of the number of phases in an adaptive filtering would have been advantageous over the prior art of record.*

Moreover, Greggain teaches an adaptive filter wherein the number of phases is determined using the filter lookup table as a function of the output resolution Greggain's lookup table for mapping the output resolution into a number of phases or the filter size *may also be determined by the [sic] right shifting. Greggain thus expressly discloses "a third variable from the output of the filter lookup table which maps the filter size to a filter factor and then right shifts the target increment by this amount to generate the number of phases."*

Id., p. 5 (emphasis added).

As noted in the Response to the Previous Office Action (hereinafter, "the Previous Response"), neither 35 U.S.C. Section 103 nor any other applicable statute, code, regulation or rule requires the Applicant to particularly identify the advantage of each claimed feature in order for the features to be novel or non-obvious. Accordingly, the Office's indication that the claimed third variable feature is well known due to an alleged failure by the Applicant to particularly identify the advantage of the third variable feature is improper. Regardless, Applicant notes that the passage at, *inter alia*, paragraphs 0012-0018 and FIGs. 2 and 3 of the Present Application describe various advantages of the claimed control word, including the third variable feature.

As also noted in the Previous Response, contrary to the Office's assertion that Greggain "expressly discloses" the third variable feature, Greggain fails to disclose, or even suggest, right shifting a value in any manner, much less that the number of right shifts indicated by a variable of a control word, when applied to another variable of the control word, indicates a number of phases used in a scaling cycle as provided by claim 1. At page 3 of the Present Office Action, the Office asserts that "Greggain's number of upsample increments or the number of phases used

PATENT

in the adaptive filtering is determined using the right shifting of the target output resolution parameter such as the target increment . . ." (emphasis added). However, the Present Office Action fails to cite a particular passage of Greggain in support of this assertion. It is respectfully submitted that no passage of Greggain in support of this assertion can be found. The Present Office Action further asserts that "Greggain's look up table for mapping the output resolution into the number of phases or the filter size also may be determined by the right shifting." *Id.* (emphasis added). Again, the Present Office Action fails to cite a particular passage of Greggain in support of this assertion and no passage of Greggain in fact supports this position. Assuming, *arguendo*, that Greggain did disclose applying a right shift to the look up table, neither the Present Office Action nor Greggain provide any disclosure or suggestion of the number of right shifts represented by a variable. In contrast, claim 1 recites the features of "a third variable indicating a number of right shifts which, when applied to the second variable, indicates a number of phases used in the scaling cycle." Thus, Parker and Greggain fail to disclose, or even suggest, individually or in combination, the third variable feature recited by claim 1.

As additionally noted in the Previous Response, the Office expressly acknowledges that "Parker is silent" with respect to the claimed features of a control word and implicitly acknowledges that Greggain also is silent with respect to the claimed features of a control word because the Office Action makes no mention that a control word is taught by Greggain. Moreover, Greggain in fact fails to disclose or suggest a control word as recited by claim 1. Accordingly, Parker and Greggain fail to disclose or suggest the features of a control word as recited by claim 1.

As further noted in the Previous Response, the Office's assertion that one of ordinary skill "would have found it *obvious* to incorporate adaptive filtering of Greggain into Parker's method," has no bearing on whether the combination of the teachings of Parker and Greggain is proper. Rather, the Office must show that there is *motivation* to combine the cited references either in the references themselves or in the knowledge of one of ordinary skill in the art. The Office fails to establish that either Parker or Greggain provide any motivation for their

¹ It should be noted that the Office's assertion that this claimed feature is arbitrary and of unascertainable performance over other adaptive filters would contradict any assertion by the Office that one of ordinary skill in the art would be motivated to combine the teachings of Parker and Greggain to arrive at this claimed feature.

PATENT

combination. Thus, the Office's proposal for the combination of the teachings of Parker and Greggain is merely a hindsight reconstruction in view of the teachings of the present application.

Parker and Greggain fail to disclose or suggest the particular combination of features recited by claims 10 and 16-18 and fails to establish a prima facie case of obviousness with respect to claims 10 and 16-18

With respect to independent claims 10 and 16-18, the Present Office Action rejects these claims as "subject to the same rational of rejection as set forth in claim 1" and provides no further explanation for the rejection of claims 10 and 16-18 in view of the proposed combination of Parker and Greggain. *Present Office Action*, p. 9. However, claims 10 and 16-18 recite features not recited by claim 1 or any of its dependent claims. To illustrate, claim 10 recites the features of incrementing a current phase location within a scaling cycle by a first variable to obtain a first adjusted scaling cycle; decrementing, in response to the first adjusted value being greater than a second variable, the first adjusted value by one or more times the second variable indicative of a number of output pixels in the scaling cycle to obtain a second adjusted value less than the second variable; and determining an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount. Independent claims 16-18 recite features similar to those recited by claim 10. Thus, because the Present Office Action fails to address how the additional recited features of claims 10 and 16-18 are disclosed or suggested by either Parker or Greggain in any manner, the Present Office Action necessarily fails to establish a *prima facie* case of obviousness under 35 U.S.C. Section 103(a).

Moreover, the Office acknowledges that "Parker is silent to 'incrementing a current phase location to obtain a first adjusted value' and 'decrementing the first adjusted value to obtain a second adjusted value' and 'determining an index value to access a coefficient set'." *See Office Action mailed March 1, 2005*, p. 6. As noted in the Response dated August 1, 2005, the claimed features identified by the Office for which Parker provides no disclosure represent most of the recited features of claim 10 and the similar features of claims 16-18. The Present Office Action does not assert that these features are disclosed or suggested by Greggain, nor in fact are these features taught by Greggain.

Further, as discussed above, neither Parker nor Greggain disclose or suggest coefficient sets or right shifting in any manner, so Parker and Greggain necessarily fail to disclose or

PATENT

suggest, individually or in combination the feature of determining an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount as recited by claim 10, the feature of means for determining an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount as recited by claim 16, the feature of instructions to determine an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount as recited by claim 17, or the feature of operations to determine an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount as recited by claim 18.

The obviousness rejection of claims 1-18 should be withdrawn

As established above, Parker and Greggain fail to disclose or suggest, individually or in combination, at least one feature recited by each of independent claims 1, 7, 10 and 16-18. Accordingly, the proposed combination of Parker and Greggain fails to disclose or suggest each and every feature recited by claims 1, 7, 10 and 16-18, as well as the additional features of claims 2-6, 8, 9 and 11-15 at least by virtue of their dependency from one of claims 1, 7 or 10. Accordingly, it is respectfully submitted that the obviousness rejection of claims 1-18 is improper at this time and reconsideration and withdrawal of this rejection therefore is respectfully requested.

Conclusion


The Applicant respectfully submits that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

PATENT

The Commissioner is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account Number 50-1835.

Respectfully submitted,

3/3/06
Date


Ryan S. Davidson, Reg. No. 51,596
Larson Newman Abel Polansky & White, LLP
5000 Plaza On The Lake, Suite 265
Austin, Texas 78746
(512) 327-5515 (phone) (512) 327-5452 (fax)